

NOTES AND NEWS.

A "CONSPECTUS FLORÆ AFRICÆ" is promised by Messrs. Durand of Brussels, and Schinz of Zürich.

THE ENTIRE EDITION of the *Proceedings* of the Society for the Promotion of Agricultural Science for 1891, which was ready for mailing, was burned in the fire at Columbus, Ohio, January 26th. Re-printing the edition has already begun.

MR. C. W. SEELYE, of Rochester, N. Y., has published "A list of the indigenous ferns of the vicinity of Rochester, with notes," a reprint from *Proceedings of the Rochester Academy of Science*. Of the 53 species of ferns credited to New York state in the Torrey club list, the flora of the vicinity of Rochester contains 35.

A LONG and able article on "Climate and plants" was read by Professor L. H. Pammel before the Iowa Horticultural Society at its meeting in January, 1891, and is published in the *Monthly Review of the Iowa Weather Service* for October last. It treats the subject from many sides, and contains a wealth of citations.

AMONG the recent bulletins from the experiment stations is one on "Some fungous diseases of the grape" by F. Lamson-Scribner, and one on "Electricity in agriculture" by Clarence D. Warner. The latter has also been published in *Science* for January 15, and is to be commended to those curious in such matters for the utter lack of logical basis for its conclusions.

THE ANNALS OF SCOTTISH NATURAL HISTORY issues its first number with the new year. It is a successor to the *Scottish Naturalist*, and resembles it in form and matter, but is much improved in both, and contains new departments. It is devoted to developing a knowledge of the flora and fauna of Scotland, both recent and fossil. The present number contains 84 pages and two excellent plates. It is a quarterly.

THE UNIVERSITY OF INDIANA has just purchased the entire herbarium of Mr. F. H. Horsford, of Charlotte, Vermont. The collection is very complete in its display of New England and Canadian plants, besides that general assortment of plants which comes into the hands of a collector. The collection is remarkable for the beauty of its specimens, many of them being the handiwork of Mr. Pringle, with whom Mr. Horsford has been so long associated.

THE FOLLOWING botanical papers were presented before the Iowa Academy of Sciences at its December meeting: Some experiments for the purpose of determining the active principles of bread-making, by Miss Minnie Howe; The action of disinfectants on nutrient media, by W. B. Niles; Slime molds of Iowa, by T. H. McBride; Bacteria of milk, Report of committee on state flora, Phenological notes, and Experiments in prevention of corn smut, by L. H. Pammel.

IN AN EDITORIAL upon the Royal Gardens, Kew, *The Gardener's Chronicle* (Jan. 2) gives an account of its rapid and splendid development since its establishment in 1841, and suggests needed extensions in two directions, viz: a staff of workers to investigate plant diseases, and another for the systematic and coöperative study of the minute anatomy of plants. The suggestion is surely a timely one. It is per-

fectly possible for this great establishment, with its unrivaled opportunities, to become "the center of energy" in many departments.

PROFESSOR WITTROCK gives in a recent paper¹ a very interesting account of the life-history of *Linaria Reverchoni*, a new species collected in Spain. The cotyledons, two or even and quite frequently three, are lanceolate-spathulate, suddenly attenuated towards the apex, which thereby forms like a terminal lobe. There is a long hypocotyl, from the base of which adventitious buds develop and soon grow out, while the main shoot finishes its growth at a very early stage and without any development of either flowers or vegetative buds. The propagation of this species is therefore dependent upon the formation of these adventitious shoots, which are terminated by an inflorescence, besides which they may also branch and often carry a few secondary inflorescences.—T. H.

AGRICULTURAL SCIENCE, founded by Professor C. S. Plumb five years ago, and ably conducted by him up to the close of last year, has been transferred to Professor Wm. Frear of the State College, Pa., who will in future assume the financial and editorial management. Professor Frear has secured the coöperation of sixteen prominent investigators, who will give editorial assistance in the several departments of agricultural activity. Only one of these, Professor F. L. Scribner, is a botanist, and to him is assigned the duty of looking after "botany and mycology," according to the prospectus. The "and" in that triplet of words is a pretty sure indication that the management is not especially familiar with the several departments of botany, and probably does not appreciate its present scope or its importance as a science underlying a large proportion of agricultural operations. The journal has occupied an important place in the past; and it deserves hearty support under the new relations.

PROFESSOR LESTER F. WARD's paper on "Principles and methods of geologic correlations by means of fossil plants," read before Section E of the A. A. A. S., Washington meeting, is printed in the *American Geologist* (Jan.). Of course it is a strong putting forward of the claims of paleobotany by one of its most competent exponents; but a point of special interest to botanists is the retort made by the author to the general botanical accusation of paucity of material and uncertainty of results. Stating that paleobotany has added not a little to our knowledge of botany proper, the author proceeds to say: "For example, it is the habit of botanists to figure leaves so carelessly that the paleobotanist is unable to tell the genera to which they belong. This is chiefly due to the fact that they ignore, as a rule, the exact nervation of leaves, and are content to figure them almost from the standpoint of the artist, merely for the sake of the effect. Paleobotany has taught the botanists that the nervation of leaves is important, and that wherever possible it should be carefully figured. We are indebted to fossil plants for the discovery that nervation in leaves is of generic rank, whereas form, upon which the botanist chiefly relies, is usually only of specific rank." Botanists must confess to myriads of figures of leaves, in which the nervation is merely conventional.

¹ *De Linaria Reverchoni* n. sp. observations morphologicae et biologicae. Acta horti Bergiani, vol. 1. no. 4, Stockholm, 1891.